



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Frederic BESEME et al.

Group Art Unit: 1636

Application No.: 10/717,580

Examiner: G. Leffers

Filed: November 21, 2003

Docket No.: 105045.01

For: ENDOGENETIC RETROVIRAL SEQUENCES, ASSOCIATED WITH
AUTOIMMUNE DISEASES OR WITH PREGNANCY DISORDERS

PRELIMINARY REMARKS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Claims 1-35 are pending. Prior to initial examination, please consider the following remarks.

It is well known that Human Endogenous Retroviruses (HERVs) are involved in pathological conditions. The detection of sequences belonging to the HERV-W family as defined in the present application provides means for locating and/or identifying the nucleic material of HERV-W family, the nucleic material being involved in autoimmune diseases and in states of pathological pregnancy or unsuccessful pregnancy.

For example, the following articles, an abstract of which is attached, shows the well-established utility of detecting and/or identifying the nucleic material of HERV-W family:

- 1) Mi S. et al., *Nature* (2000) 403 (6771): 785-9: This article shows that the syncytin encoded by the env gene of HERV-W plays a role in human placental morphogenesis;

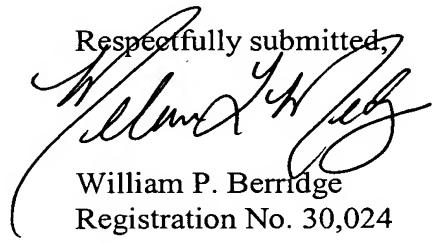
2) Lee X. et al., *Placenta* (2001) 10:808-12: This article evidences that in pre-eclampsia, syncytin gene expression levels are dramatically reduced and altered expression of the syncytin gene and altered cellular location of its protein product contribute to the aetiology of pre-eclampsia;

3) Knerr I. et al., *Am J. Obstet. Gynecol.* (2002) 186(2):210-3: This article confirms that the reduced placental expression of syncytin contributes to altered cell fusion processes in placentogenesis and disturbed placental function of hypertensive disorders of pregnancy; and

4) Kudo Y. et al., *Biochim. Biophys. Acta.* (2003) 1638(1):63-71: This article describes that the dysregulation of the expression of syncytin and of its receptor may suppress the normal process of cell fusion necessary for syncytiotrophoblast formation and contributes to syncytiotrophoblast abnormalities characteristic of pre-eclampsia.

Early and favorable consideration of the present claims are respectfully requested.

Respectfully submitted,



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WPB:MLM/dap

Attachment:

Abstracts (4)

Date: May 10, 2004

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